

P093 Is kidney ureter bladder X-ray enough for the evaluation of residual stones after retrograde intrarenal surgery?

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Introduction & Objectives: Residual fragments after retrograde intrarenal surgery (RIRS) can lead to pain and obstruction. However, the evaluation time and method for the residual fragments is still unclear. The aim of this study was to evaluate the role of kidney-ureter-bladder (KUB) X-RAY in determining the stone-free rate in terms of postoperative rest stone evaluation.

Materials & Methods: After an Ethical Committee approval has been obtained, 93 patients who underwent RIRS, whose stone size were 1-2 cm were evaluated with postoperative first day KUB X-ray and third month non-contrast computed tomography (NCCT) between January- November 2018. Patients with anatomical anomalies (horseshoe kidney, ureteric stenosis, etc.) with a history of open stone surgery were excluded from the study.

Results: The mean age of the patients was 45 ± 13.3 years. The mean stone size (max. diameter) was 15.3 ± 4.3 mm. Preoperative double j stent implantation was performed in 26.9% of the patients. The stone-free rate (<4 mm) was 76.3% on the postoperative 1. day with KUB, while the stone-free rate was 83.9% with third month NCCT. Thirteen-point-three percent of the patients had residual fragments with NCCT, whom were determined stone free in postoperative first day KUB. KUB is found not predictive for stone free status in comparison with NCCT($p=0,06$).

Table 1. Patients' Demographics.

Mean age	45±13,3
Stone size (max. diameter)	15,3±4.3
Hydronephrosis	
Grade 1	39(42%)
Grade 2	47(50%)
Grade 3	7(8%)
Stone location	
Upper calyx	4(4.3%)
Middle calyx	5(5.5%)
Lower calyx	32(34.4%)
Renal Pelvis	50(53.8%)

Table 2. The evaluation of stone free rates for imaging techniques.

	KUB X-Ray	NCCT
<4 mm	71 (76.3%)	78(83.9%)
≥4 mm	22(23.7%)	15(16.1%)

Table 3. Comparison of the methods for stone free status (McNemar test: p=0,06)

		NCCT	
		< 4 mm	≥ 4 mm
KUB	< 4 mm	88.5%	13.3%
	≥ 4 mm	11.5%	86.7%

Conclusions: As a result, patients are not eligible to evaluate the residual stone with the KUB alone after RIRS. The evaluation of patients with NCCT is more effective and reliable.